THE VETERINARY RECORD

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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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THE A.V.S.

We print this week portions of a despatch from the Egyptian Force giving names of those "recommended to notice." Though we at home are satisfied that the work there is in safe hands, it is gratifying to see the public acknowledgement which is due to them.

We print also portions of a description of a visit a Veterinary Hospital in England, written for and published by a local paper. It is scrappy, it is vague, it is untechnical; it was originally bordered with unnecessary phrases, after the manner of that section of the public press. But it is all that has come to us—and it was "lifted" from the pages of *The North British Agriculturist*.

Why this silence? "Professional etiquette"? Well, perhaps! But is there not a line, if only an indefinite one, between information and advertisement? Or is it that the superiors, from Major upwards, are so imbued with the spirit of military discipline that they stifle all initiative, instead of trying to get the best they can out of their boys?

EPSOM *v.* GLAUBER'S SALTS.

The latest note on this subject comes from Mr. H. Thompson, whose remarks contain two noteworthy points. One is the advice, which many old practitioners will endorse, that salts should be given with a liberal admixture of carminatives. The other is Mr. Thompson's preference for sodium sulphate rather than magnesium sulphate. Probably many English clinicians are not aware that this view is commonly held in America. Winslow, in his standard American text-book upon veterinary materia medica and therapeutics, states that in veterinary practice sodium sulphate acts more effectively than magnesium sulphate, "and, in fact, is the best saline cathartic we possess." Sodium sulphate, again, is the chief ingredient of Carlsbad salts; and artificial Carlsbad salts have long been much used by Continental veterinarians, especially by Germans. This divergence from English practice, in which magnesium sulphate is usually preferred, adds interest to the subject. We have the question of whether saline purgatives deserve their vogue in cattle practice, the further one of how they should be used, and, lastly, which of them is to be preferred.

ADRENALIN CHLORIDE IN EXCESSIVE STRAINING IN CATTLE AFTER PARTURITION.

In the August number of the *Veterinary Notes* issued by Messrs. Parke, Davis & Co., Chemists, Beak Street, London, W., I noticed a short article which reminded me of some cases I had treated. No doubt many country practitioners will have met with these annoying, obstinate cases of excessive straining in cows after parturition; indeed, some animals strain and press so violently that for humanity's sake the poor brutes have to be slaughtered—the adminstration and application of suitable remedies have no practical effects.

Some time ago we were called to a heifer about 24 hours calved: on reaching the farm we found the animal down, lying on the right side, paining and straining, or, as the owner remarked, "She was going to press her inside out." She had been hard put to it at the calving (possibly they had been in too big a hurry—a very common practice) but a live calf had been produced; the after-birth had come away immediately after.

With difficulty she was got on to her sternum and belly; 12 drachms of chloral hydrate dissolved in a pint-and-a-half of cold water was administered, and the os uteri smeared well with ij5 extract of belladonna. A heavy sack soaked in cold water was laid across the loins and quarters—this to be renewed every hour for 10 or 12 hours. A laxative drench was given, and sedative medicine left, with instructions to be given if necessary. The patient settled down and appeared to be doing well for 30 hours, when she commenced to strain violently, and we were again sent for. From experience of such-like cases we had anything but a favourable impression of our patient. My son was with me, and suggested injecting the os with adrenalin chloride, and to this I agreed. He washed his hands well with hot water and soap, then smeared them over with fine olive oil and passed one hand into the vaginal passage; with an ordinary hypodermic syringe a drachm of adrenalin chloride (P. D. & Co.) was injected into the walls of the neck of the womb, one on each side of the os uteri. This was accomplished with some little difficulty, as the cow was lying on her right side and pressing heavily. Within ten minutes after injection of the adrenalin the cow seemed quite relieved, ceased paining, rolled on her belly and appeared quite comfortable, and within half-an-hour was on her feet eating hay. She went on all right without any more trouble.

Since then several cases have been similarly handled with equal success. Three cases of eversion of the rectum in young horses have also been

treated by injecting the adrenalin chloride into the walls of the bowel before returning, and with the most gratifying results. Whilst in-lamb ewes which have everted the vagina and os uteri—frequently seen in frosty weather—have been successfully treated in a similar manner. I may add that the effect of adrenalin chloride in such-like cases is marvellous.

The dose of laxative medicine administered to the cow was 12 ounces of exsiccated sulphate of soda (Glauber salts) with three ounces of mixed carminatives added, and given as a drench. Whilst agreeing in the main with Mr. W. R. Davis' article on the administration of Epsom salts to cattle, in the 19th of August issue, I have found that where salts—either sulphate of magnesia or sulphate of soda—are indiscriminately used, that is one large dose after another, they have a very injurious and poisonous action, inducing partial paralysis of the walls of the compartments of the stomach, followed by inertia of the other organs of the body. Yet, on the other hand, salts (the sulphate of soda for preference) when handled judiciously, and plenteously combined with suitable aromatics, are, to my mind, one of the sheet anchors in the treatment of herbivorous animals.

HENRY THOMPSON, M.R.C.V.S.

Aspatria, Sept. 21st.

TWO PECULIAR DISEASES IN U.S.A.

SCREW WORM.

This resembles a maggot, but rather longer, with sharp extremities. When on the ground it has the power of jumping almost twice its own length. It affects the anus and scrotum of the horse, has the power of burrowing into the tissues and completely destroying them, giving them a moth-eaten appearance. If discovered at once a few drops of chloroform destroys them before any material damage is done. The Mexicans lose numbers of horses and cattle through this pest.

PARALYSIS OF THE HIND EXTREMITIES.

Horses suffering from influenza, but convalescent, after treatment with 30 c.c. Parke, Davis' anti-toxin. Found down in the morning and unable to rise; pulse, temperature, functions and temperature normal.

Treatment: Strychnia hypodermically, invariably fatal in from 12 to 24 hours. Diagnosed spinal meningitis, but differed in that there was no rise in temperature.

If any member of the profession can render a diagnosis and treatment I shall be very much obliged to him.

JOHN E. FOWLER, M.R.C.V.S., Veterinarian. 1st Utah Cavalry, Nogalls, Arizona, U.S.A.

(Since writing the above a perfectly healthy transport mule was found down and unable to rise).

ABSTRACTS FROM FOREIGN JOURNALS.

TUMOUR OF THE CEREBELLAR CHOROID PLEXUSES IN A MULE.

Alete Borella, a Veterinary Captain in the Italian Army, records this case because the literature is not very rich in such, and it is the first of the kind he has seen in twenty-five years experience.

The subject was a mule, a gelding of six years old. This animal was brought into Borella's infirmary on March 28, with a diagnosis of hydrocephalus made by an official veterinary surgeon who had previously treated him for about four weeks. This veterinary surgeon verbally reported that at first the mule had shown symptoms of cerebral irritation, staggering on the fore limbs, etc., and had been treated with strong purgatives and dieting. This had brought about a sensible improvement, so that after ten days the mule could be led for long walks. Afterwards alternations of retrogression and improvement were observed; and finally the animal was brought to the infirmary because, the day before, the signs of cerebral irritation had reappeared with increased gravity.

When examined by Borella, the mule showed difficulty in standing, with a tendency to lean towards the right. Left to himself, he turned in a circle to the right, and easily fell to the ground. the prehension of food was rendered difficult by continual swaying movements of the head. The eyes were held half-closed, and the right one often showed blinking movements of the upper lid. The number of respirations, the temperature, the pulse, and the nasal, oral, and conjunctival mucous membranes, were all normal.

Palliative treatment was adopted. About three litres of blood were taken from the left jugular, a purgative was given, and the mule was lodged in a quiet stable and dieted with green food. This, in three or four days, caused a notable improvement, so much so that the animal could be taken to water at the common watering-place. The disturbances in the movements were greatly improved; but a tendency to bear to the right in progression persisted, and the animal, when standing in the stable, leaned against the right wall. Lying down and rising were performed in a hurried and rather irregular manner.

After ten days these conditions still persisted; and treatment with increasing doses of potassium iodide and some subcutaneous injections of hydrochloride of pilocarpine was tried. This appeared to accelerate the earlier improvement so much that the mule seemed almost normal both in movement and repose. Afterwards, however, the morbid symptoms reappeared with the same intensity as before, and slaughter was decided upon. This was carried out on May 5 by bleeding; and the cranial cavity was examined with the following results.

The cerebellar choroid plexuses were found to be augmented in volume, congested, puffy-looking, and dark red in colour. At the external margin of

their left portion six small, white, uniform, subміliary bodies were found, which to the naked eye resembled the proto-scolices of the cysts of *Cœnurus cerebralis*. They were at first thought to have escaped from an inadvertently incised cyst; but, as search did not reveal a cyst membrane, they were microscopically examined, and appeared to be formed solely of calcareous matter.

The swollen cerebellar choroid plexuses were then examined histologically. This examination revealed a small tumour formed from the cerebellar choroid plexuses and constituted of delicate papillæ covered by cells of epithelial aspect. The papillar derma was very rich in vessels, which at some points were so numerous and closely amassed as to give a cavernous aspect to the tissue. The tumour might be defined as a vascularpapilloma; and, on account of its origin, it might also be considered a vascular endothelioma of papillomatous structure.

From the great vascularity of the tumour, it is certain that even a slight congestion of the vessels enveloping the central nervous system would re-percuss notably upon it, causing an augmentation of its volume and hence a stronger compression upon the inferior lateral aspect of the cerebellum and upon the superior aspect of the isthmus. Observations of tumours very similar to this one upon the superior aspect of the isthmus, seen in horses by Hutyra and by Meyer, are cited in the literature.

Finally, Borella alludes to a point regarding which his views are supported by those of various colleagues who saw the case during life and post-mortem. This is that, without the microscopic examination of the calcareous nodules and the histological examination of the diseased tissue, one might have been induced to think the mule affected by cerebral cœnurosis, and this may have happened previously in the cases diagnosed as equine cœnurosis when the finer methods of investigation were lacking.—(*La Clinica Veterinaria*).

Cerebral Tumour in a Horse.

Picard has recorded the following case (*Revue Gén. de Méd. Vét.*). The subject was a mare which entered the infirmary with very marked cerebral disturbances. There were exceedingly violent crises, during which the animal threw herself against all the surrounding objects. The diagnosis was acute meningo-encephalitis; and the mare died at the end of twenty-four hours.

The post-mortem lesions were very interesting. The dura mater was congested, and showed thickenings in some places. There was also congestion of the pia mater, and of all the encephalic mass. The left hemisphere appeared to be more congested than the right one. The encephalic mass was œdematous and of very abnormal volume.

A horizontal section of the two hemispheres through the superior part of the corpus callosum allowed the escape of a considerable quantity of dark yellow fluid from the right lateral ventricle. The left lateral ventricle was occupied by a yellow fibrinous tumour showing much superficial vascularisation. This tumour was six centimetres long and extended over all the anterior cornu of the ventricle. As it was larger than the ventricle, it pushed against the ventricular walls and compressed the centrum ovale, which was slightly congested. The anterior extremity of the anterior cornu of the ventricle reached to a centimetre from the frontal extremity of the left hemisphere and was anterior to the right ventricle. The tumour preserved the impression of the fingers and exuded a great quantity of serum.

Histologically, the tumour proved to be a round-celled sarcoma with large spaces in which mucoid tissue predominated. It could therefore be classed as a myxo-sarcoma.—(*Revista de Veterinar Militar*).

Internal Massage in the treatment of Equine Flatulent Colic.

Rectal massage with the closed fist is among the measures recommended by Klingberg in the treatment of equine colic. The object of this massage is to work upon the pelvic flexure of the colon and upon the bladder. P. Ferret, a French Army veterinary surgeon published an article in 1913 describing intestinal massage by means of the introduction of almost the whole arm, a method which has given him satisfactory results.

Ferret's first case occurred five or six years before he published his results. This case was a horse attacked with colic, upon which injections of nitrate of pilocarpine, bleeding, dry rubbing of the abdomen, and numerous clysters had not produced any effect. Ferret explored the rectum, introducing his arm as far as the deltoid. The rectum was empty; and its exploration revealed nothing abnormal except a gaseous distention of the large colon. Ferret applied massage to the bladder, the pelvic flexure of the large colon, and the intestinal coils as far as he could reach for a quarter of an hour. After his arm was withdrawn, a considerable expulsion of gases took place from the anus. The horse, which had been lying down for about an hour, rose, urinated, and defecated. The emissions of gas continued; and, half an hour afterwards the case could be considered cured.

Ferret afterwards treated, with the same success, many other horses suffering from colic accompanied by an abnormal production of gases. He has also treated cases of colic from intestinal obstruction by internal massage; and though the results are slower and require time and perseverance, they do not appear to be less efficacious on that account. Intestinal obstruction may commence in various ways; it may suddenly manifest itself by very acute pains, modifications in the force and velocity of the heart, and acceleration of the respiration; or at first the symptoms may lack the appearance of gravity, acquiring these later. In either case massage provokes expulsive efforts which the animal appears unable to accomplish; and stimulates intestinal peristalsis. It is possible, also, that internal massage stimulates the secretion of the intestinal glands. It has always seemed to Ferret that, after the operation, the rectum and the last portions of the floating colon contained more fluid than at the moment when the arm was introduced.

The chief indication for internal massage, however, is when the colic is accompanied by the production of gases. The pain, which is almost exclusively dependent upon this gaseous production, is allayed by the expulsion of gases which internal massage causes. The massage also stimulates intestinal peristalsis, facilitates the progression of the fæces, and awakens contractions of the bladder.

Being easy of execution and devoid of fear of serious complications, the procedure appears to Ferret to be very useful in practice.

The manual operation is simple. The hand, forearm, and arm are rendered aseptic, and oiled to facilitate their introduction. The hand is first placed upon the inferior wall of the rectum, and the bladder is searched for and massaged. The arm is then further introduced up to the beginning of the deltoid; and the colon, cæcum, and adjacent intestinal coils are massaged. Usually the peristaltic movements of the intestine are perceived fifteen or twenty minutes after the commencement of the operation, and are followed by the expulsion of gases. The expulsion of gases may be somewhat delayed, and in that case it may be facilitated by withdrawing the arm quickly and not reintroducing it for five or ten minutes.

So far, Ferret has never encountered any case of damage to the rectum—neither rectal prolapse nor proctitis—following a prolonged massage.—(*Revista de Higiene y Sanidad Veterinaria*).

W. R. C.

The Waste of Flesh Food.

The paper on this subject, reprinted in our issue of Sept. 16th, p. 120, was followed by a discussion, of which the following contributions are the concluding portion.

"Professor G. H. Wooldridge said that he did not quite agree that it was not of much importance at the present time to discuss whether or not the bacilli of human and bovine tuberculosis were identical. The main point to remember was that the bacillus of bovine tuberculosis was capable of infecting the human subject, and of producing serious and even fatal cases of tuberculosis. That being so, no effort should be relaxed to prevent human beings consuming foods containing tubercle bacilli.

The recommendation of the Royal Commission on Tuberculosis concerning the condemnation of the flesh of swine affected with tuberculosis had been called into question, and there was no doubt that the condemnation of the whole carcase of a pig that was affected with tuberculosis, in which the pharangeal lymphatic glands showed the only visible lesions, would in many cases involve the loss of a considerable quantity of perfectly safe and wholesome food. But one must bear in mind the very great tendency to generalisation in tuberculosis in pigs, and the fact that after the blood stream has been invaded and the organisms distributed throughout the body, visible lesions did not make a sudden appear-as though by magic. A certain interval occurred, during which it would be quite impossible for anybody to say from microscopic examination whether generalisation had or had not taken place. No modification of that recommendation would be safe except after a very careful examination by a competent and fully trained responsible inspector. That brought him (the speaker) into agreement with Dr. Howarth, and he emphasised the point that a very thorough knowledge of veterinary anatomy and veterinary pathology, and an intelligent application of that knowledge, was essential to any efficient system of meat inspection.

Much had been said as to standards in food inspection, and the maintenance or reduction of standards. With regard to flesh foods, his far greater concern was the almost complete absence of any standard at all, and the very great lack of uniformity such as was indicated by the author in his paper. He agreed with Dr. King Brown in asserting that no approach to efficient and uniform inspection could take place unless public abattoirs were built, and their use made compulsory. At the present time a considerable number of butchers were opposed to abattoirs, mainly, he believed, because of the inconvenience they would cause, but he also believed that the whole trade could be easily won over by a change in our principle of responsibility. At present the onus of deciding that meat was fit for sale rested with the traders—men, in the vast majority of cases, of integrity and honesty (and here he wished to dissociate himself from the remarks made on traders by Dr. King Brown), but men who were not pathologists or anatomists. Of course, butchers could readily recognise grossly diseased organs and tissues, but it was the less obviously diseased foci that were likely to be the most dangerous, because they would be the less likely to be recognised. Consequently, in his opinion, the whole responsibility should rest with the authorities, and it should be made illegal to expose for sale any flesh that had not been examined and certified fit for human food.

Universal inspection could only be carried out at one centre in each public health authority's district, such as the abattoir; and he believed that the traders would waive their objections to public abattoirs if they were thereby also relieved of the other responsibility. What could be more grossly unjust than to institute a criminal prosecution against a butcher for exposing for sale a joint purchased in good faith at full market price at Smithfield after having been open to inspection and presumably passed by the very diligent and competent staff of meat inspectors at the market? In his opinion such a prosecution amounted to persecution. He did not for one moment wish to shield the unscrupulous 'slink' butcher. Any man who knowingly sold diseased meat should be prosecuted with the utmost rigour of the law. He did not consider that it would be wise to relax in any way their efforts to provide good and sound meat for the people. He would rather appeal for an improvement on the present system with greater uniformity, with more thoroughness, and with a weeding out of incompetent meat inspectors.

On the question of thoroughness he could not resist referring to the almost complete lack of examination of pork for the trichina spiralis. A little while ago he had received a specimen of ham from a veterinary meat inspector in Denmark. From a naked-eye examination the ham appeared to be in really prime condition, but microscopic examination had shown that it was intensely infected with trichina spiralis. He was afraid that if that ham (it was said to be American, by the way) had been exposed for sale in this country it would never even have been examined, much less confiscated.

Mr. J. R. Hayhurst (Metropolitan Cattle Market) agreed with the previous speakers that it would be unwise to change the present methods of meat inspection during war-time, for obvious reasons. Unfortunately, there was no standard of meat inspection in this country, and only in certain cities and towns was it at all satisfactory. He was of the opinion that Dr. Mason might have given more prominence to the commonest disease they had to deal with, namely, tuberculosis, for over 90 per cent. of the total carcases were condemned on account of that disease. Remembering that the recommendations were issued eighteen years ago, and that experts in other countries do not place so much

importance to the affection of the pleura and peritoneum, it was possible that those recommendations would receive consideration in the near future. If there were a change in that direction it would be a great saving to the trade, as the disease in most cases was limited to those areas. The recommendation of the Royal Commission indicated seizures of all pig carcases affected with tuberculosis, but even where meat inspection was of a high standard it was not carried out when the disease was of old standing, and localised, say, in the glands of the head. If certain farmers would take care that the food given to pigs was free from disease, such as milk from cows with tuberculosis of the udder, there would be a great decrease in the number of pig carcases condemned. No experienced inspector would condemn meat for (*a*) poorness, (*b*) for yellow carcase (except icterus), (*c*) or for being the carcase of a pregnant animal (except in rare cases). The latter ought not to occur in war-time, as the Maintenance of Live Stock Order, 1915, prohibited the slaughter of bovine animals obviously in calf.

Dr. J. Wright Mason, in reply, said apparently Dr. Brown had not fully understood some points in the paper, for whilst it would be admitted that .5 to .57 per cent. of condemned food would be looked upon as an insurance premium for high-class food, the fact remained that the percentage of condemned and destroyed food was very much higher, and the contention was that food should not be destroyed without its highest economic value to the nation being realised. The shortage of the meat supplies in this country, as alleged by Dr. Brown, was not due only to lack of shipping facilities, but to a genuine shortage of live stock, as the Board of Agriculture reports would show. It was unfortunate that Dr. Brown thought that a medical officer's duty was strictly limited to disease and disease prevention, and not, as indicated in a confidential circular of the Local Government Board, to a wider aspect of the supplying of a possible food in times of stress. He would recommend to Dr. Brown's attention the experiments recently carried out by the Glasgow Health Authorities *re* sterilisation of food.

Dr. Rideal's remarks he considered bore out the contention that, in condemned and destroyed stores, there were highly valuable residuals available for national purposes which were not used at the present time. The comments of Dr. Howarth were mainly in agreement with the views expressed in the paper, with slight modifications, which could not be objected to. It must, however, be remembered that such a paper was open to many alterations and suggestions, being, as it was, an attempt to meet difficulties which might arise, and for which we should be prepared, even though the necessity for carrying out the suggestions contained in it might not eventuate."

Self-regulation of the Gastric Acidity.

For a considerable time in medical science it has been the established conviction that the acidity of the gastric juice—*i.e.*, the quantity of free hydrochloric acid in man and animals—usually varies from 0.1 to 0.2 per cent. This figure was arrived at by examining the stomach contents but not the pure juice. It was found that in the dog's stomach, an isolated portion, the acidity was as high as 0.5 to 0.6 HCl ; the same applied to rabbits and cats. Later the pure juice of the stomach was obtained in human beings, and in them also the acidity was from 0.32 to 0.47 per cent. The acidity is also constant.

Clinicians still accepted this as definite hyperacidity. And this because no one could explain why the gastric juice from the whole normal stomach, as distinguished from isolated portions, should almost always contain a lower concentration of acid. The answer now is that the acidity of different acid fluids introduced into the stomach is reduced during their stay in that organ; the reduction of acidity applies also to its own acid juice. How is such reduction effected?

Prof. Boldyreff, in the *Quarterly Journal of Experimental Physiology* (1914, vol. viii., p. 1), quotes some conclusive experiments to show that such reduction is effected by the alkaline pancreatic juice which regurgitates into the stomach, such action being itself initiated by the acidity. The experiments were performed on dogs. Ligature of the pancreatic ducts results in a definite delay of reduction of acidity ; and not only so, with such delay there is also a lessening in the rate of emptying from the stomach. Ligature of other sources of alkali, such as the saliva or the bile, was followed by much less evident diminution of acidity. The fact, too, that the concentration of chlorides in the stomach remains constant shows that reduction of acidity is not due to the absorption of the acid by the gastric mucous membrane. In absence of pancreatic juice the acidity can be to some extent lowered by the abundant influx of bile and intestinal juice. Apparently there is a general law which extends to all cases. A portion of the strong acid fluid passing from the stomach into the intestine provokes an abundant secretion, especially of the pancreatic juice ; it, moreover, provokes antiperistalsis in the intestine, which drives the alkaline secretion into the stomach until a sufficient quantity accumulates which is capable of bringing the acidity to the level of about 0.15 per cent. HCl.

It is thus easy to reconcile the results obtained by physiologists and clinicians. The initial acidity is 0.5 ; the final acidity is about a third of this, a degree at which protein digestion in the stomach is most favoured. These facts suggest an explanation of the rapid emptying of the stomach, which radiologists note as indications of duodenal irritation. Many other clinical findings may be illuminated by these useful observations.—*The Lancet.*

Latent Tuberculosis.

Not many years back, some veterinary practitioners were led to doubt the efficacy of the tuberculin test in bovines because some animals which had reacted to inoculation failed on post-mortem to show any visible evidence of the infection. This phenomenon was noted in human medicine by Orth as far back as 1879, and other observers confirmed his statement ; and later it was shown that the glands most commonly affected might show no histological evidence of disease, yet the injection of material from them would reproduce the disease in animals. This phase of the question has recently been the subject of "An Experimental Study," by Mr Chung Yik Wang, M.D., B.SC., Carnegie Research Scholar ; formerly McCunn Research Scholar, (from the Royal College of Physicians' Laboratory, Edinburgh), and a report of his work is published in *The Lancet*, of Sept. 2.

He commences by a definition :—"Latent tuberculosis, in a sense other than that applied clinically, may be defined as an infection of the body with tubercle bacilli without the infection showing a specific development—that is, a new formation or change of tissue which can be recognised by macroscopic or microscopic examination."

Details of his procedure are given, and tables of results, and he says :—"In none of these 32 cases was there any evidence of tuberculosis in the body either on naked eye or microscopic examination. Hence it may be stated that 3 of my 32 cases were undoubted instances of latent tuberculous infection, in which living tubercle bacilli were demonstrated in the tissues of the

human body by means of animal test, and yet *in situ* these produced no changes detectable by the naked eye or the microscope."

Notes are given on the findings of previous workers, dating from Orth, and a table of the results of 9 series of researches which shows per centage varying from 1.35 to 42.85. On these the author remarks:—"From the large amount of evidence accumulated one may draw the conclusion, in spite of objections from certain quarters, notably that of Joest, that the existence of latent tuberculosis in the human body, in the meaning already defined, has been abundantly proved. Further, by means of the animal test it can be substantiated in a certain proportion of individuals otherwise not recognisable as tuberculous by the naked eye or the microscope, probably an average of about 12 per cent., with perhaps variations at different periods of life.

Bartel and Spieler lay great stress on the importance of a lymphoid or pre-tubercular stage, which is characterised by enlargement and swelling of the glands before there is any histological evidence of tuberculosis. How long tubercle bacilli may remain latent in the human body cannot be determined on the present knowledge of the subject; but in the case of animals Bartel has demonstrated that tubercle bacilli may reside in the tissues as long as 104 days without producing any specific changes. He used for his experiment rabbits and guinea-pigs which were fed with human tubercle bacilli, and found that the glands of the infected animals, though normal to the naked eye and microscopic examination, contained tubercle bacilli, as was proved by their potency in producing tuberculosis in animals on inoculation."

A Veterinary Hospital.

The following notes on a visit to an A.V.C. hospital in the south is from *The Herts Advertiser* of 16th inst.:—

"Not the least among the many wonderful things this war has developed in the way of fighting death in many forms is the manner in which the Army Veterinary Corps deals with the dumb but sagacious patients which come under their care. Even human beings, in many cases, lack the sense of appreciation which is commonly shown by horses towards those who tend them when they are sick or diseased. This is a branch of the Army's work which is, perhaps, least noticed by the general public, but, for all that, it is none the less an essential part of the great military machine which has been built up in this country.

One department deals solely with cases of mange, of which the hospital gets many among these poor dumb sufferers. Indeed, of this rather common disease among horses, so many patients have been dealt with that the depot prides itself on being expert in its treatment and eminently successful in its results. Some of the men who deal with horses troubled with mange and other skin diseases are undoubtedly experts in their work, and their tender care in washing and grooming is amply rewarded by the very apparent gratitude of their charges.

Starting the tour of the hospital (which covers 84 acres of land), the first place reached was the forge, where seven men are kept busy and where men are trained for their farriery examinations; then to the well-stocked storeroom, filled with new and old equipment. Veterinary Corps recruits arrive at the depot in 'civvies,' and are rigged up completely at the storeroom. Old uniforms are sent there, too, and are despatched to some general station, where they are turned into new again—or something approaching that condition. Across the road are six loose boxes, absolutely modern in their arrangement, used for slinging and other bad cases. Crossing the road again, the visitor was shown the pharmacy, where there were many shelves of concoctions for making medicines; and boxes of instruments—all very clean and shiny.

Passing out into the grounds, the writer was shown horses in many stages of 'condition'; some grazing peacefully, tethered to pegs or a stand, others in the 'standings,' which will soon provide accommodation for 348 horses. One patient rested in slings, suffering from open hock joints, a very painful malady; others, in an adjoining 'standing,' looked as if they were suffering from gout, as their feet were wrapped in sacking: they had canker in the feet, and their constant motion gave some idea of the pain they were undergoing. A strong smell of carbolic pervaded.

Alone, in the open, stood a soft-eyed mare plagued with a stoppage of the nostrils. She was waiting for a trephining operation, which will probably effect a complete cure. Near by were two patients just recovering from septic pneumonia. Practically the only treatment accorded this disease is the open air, good food, and grooming, and the results are most satisfactory.

In another department were a number of old 'crocks,' used for transport by the corps. Under regular service these would not long be able to go the Army pace, but treated leniently at the hospital, they work three days a week, and are thus enabled to 'carry on' much longer than would otherwise be the case.

At the 'disinfecting chamber,' harness, equipment, and uniform are given a thorough cleansing. Harness taken from one horse is never put on another until it has been in the disinfector, and great care is also taken with the men's clothes. One of the sergeants in this important department went through all the terrible fighting from Mons to Loos without a scratch, and was then discharged, time-expired, whereupon he joined the A.V.C.

In a field on the other side of St. Stephen's Hill were some fifty or sixty horses, chiefly suffering from debility. These, in two fields, denoted two groups of this particular class of patient, and very obvious was the difference in the appearance of the lot which had been feeding and resting longest—a speaking testimony to the value of the treatment being given them.

Since 30th August, 1914, 3732 horses have been admitted and treated. Of this number, 90 have died, 162 have been destroyed, and 190 have been cast and sold. At the present time there are 402 animals under treatment, and the remainder, somewhere about 3000, have been cured and returned to remount depots, from whence they are sent to their units."

Sheep and disease in Queensland.

Sheep in Queensland number about 22,000,000. In 1902 the number was only 7,213,985. In none of the other Australian States are sheep so free from disease as in Queensland. No scab has existed since 1864, and then only in one or two flocks. Fluke is all but unknown, and malignant foot-root was stamped out in 1870. Lambing percentages are high, in some flocks reaching over 100 per cent. It has even reached, in particular cases, 132 per cent. The total quantity of wool produced in 1913 was 154,183,114 lbs., valued at £6,296,000 ($30,545,600.00). Most of the sheep in Queensland are merino, or fine-woolled sheep, the proportion of merinos to cross-breds and coarse-woolled sheep being 96 per cent. The principal sheep-grazing areas are to be found in the country west of the Main Range, where immense plains, clothed with magnificent grasses and saline herbs exist. The country 200 miles and over west of the coast, especially in the central district, is emphatically the home of the merino.

A divided control.

The following paragraph appears in a short article on "Animal diseases: Forty years ago—and now," in a recent issue of *The Meat Trades' Journal*. The writer refers to a prefatory note to the 1876 edition of Youatt's work on cattle, in which he says: "until within a very few years, the best veterinary practitioner was uneducated and uninformed in matters referring to cattle," and comments:—

"We readily admit that the veterinary profession has made wonderful progress since our worthy professor wrote, still it is exceedingly doubtful if our increased knowledge of live stock diseases has been utilised to the best possible advantage. Much of the inquiries which have led up to a better acquaintance with swine fever, pleuro-pneumonia, the tubercle bacilli, and the bacillus anthracis, has led to regulations and restrictions of such a character as to retard, rather than develop the systematic management of cattle and sheep. Much of this is owing to the dual control, legislative and administrative, as exercised by the Board of Agriculture and the Local Government Board. Meat inspection, for many years a neglected study, has been placed in a superior category to live stock inspection, with the result that the butcher has to bear the onus and loss of animal diseases which ought really to have been dealt with by the Board of Agriculture while the animal was alive."

Apparently the writer is acquainted with the early history of the L.G.B. and how the position was "captured" by the medical profession, whilst the veterinarian was virtually unrepresented. Conditions have materially altered, and this is one of many unsatisfactory conditions which should be amended; and one which a few capable men acting together might get set right.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1916 to the College funds:—

George Gordon, Lieut. A.V.C.	£1	1	0
W. B. Howe, Capt. A.V.C.	1	1	0
W. S. Stevens, Capt. A.V.C.	1	1	0
Previously acknowledged	774	13	6
	£777	16	6

Hunting Memorial Fund.

Amount already acknowledged in *The Veterinary Record*, November 28th, 1915	£382	10	6
Thomas Arthur Huband (F)	1	1	0
National Veterinary Medical Association, per Prof. Wooldridge, Hon. Treas.	20	0	0
	£403	11	6

Remittances may be made payable to the Hunting Memorial Fund. Cheques and Postal Orders should be crossed "London City and Midland Bank, Ltd., Kensington Branch," and sent to

HENRY GRAY, Hon. Sec. and Treas.
23 Upper Phillimore Place,
London, W., Sept. 27.

ARMY VETERINARY SERVICE

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, Sept. 23.

The following dispatch has been received by the Secretary of State for War from the Commander-in-Chief, Egyptian Expeditionary Force:—

Head Quarters, 1st July, 1916.

Sir,—In accordance with the closing paragraph of my dispatch of 1st June, 1916, I have the honour to submit a list of the names of those officers, non-commissioned officers and men whose services I consider deserving of special mention, and I beg to recommend them to your notice.—I have the honour to be,

Your most obedient Servant,
A. J. MURRAY, General.

* * * * *

STAFF—Col. (temp. Brig.-Gen.) E. R. C. Butler, C.M.G., F.R.C.V.S.
Lt.-Col. (temp. Col.) F. Eassie, D.S.O., A.V.C.
Capt. (temp. Maj.) G. W. Godwin.
Sgt.-Maj. T. Dennis, No. 154.
Maj. (temp. Lt.-Col.) A. G. Todd.
Temp. Capt. D. S. Rabagliati, Egyptian Army.
Sgt. (Atg, Sgt.-Maj. W.O., Class I.) J. Bain, No. 25.
Pte. (Atg. Sgt.) J. Bryce, No. S.E.3589.

REGULAR FORCES. ARMY VETERINARY CORPS.

Sept. 23.

Lieut. to be Capt.:—R. H. Stalker (July 8).

Sept. 26.

The following temp. Lieuts. relinquish their commns. on termn. of engagement:—R. G. Gray, J. W. Welch (Sept. 13); W. H. Tummonds (Sept. 27).

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

Sept. 26.

Lieuts. (temp. Capts.) to be Capts.:—J. B. Taylor (March 29); W. D. Allen (Apl. 27).

CANADIAN A.V.C.

Sept. 22.

Lieut. to be temp. Capt.:—F. D. Shaver (June 15).

Sept. 26.

Capt. C. C. Evely is dismissed Service by sentence of General Court-Martial (Aug. 29.)

Sept. 27.

Lieut. to be temp. Capt.:—C. W. Baker (June 29).

The following casualty is reported:—

DIED—Pte. J. D. Graham, 4272.

OBITUARY.

ROBERT RUDDLE COLE, M.R.C.V.S., Hinckley, Leicestershire. Graduated, Lond: March, 1874.

Mr. Cole's death occurred suddenly on Sept. 22nd, at Colchester, while acting as Civil Veterinary Surgeon, to the 66th (East Lancashire) Division.

Mr. Cole was walking near the Camp Church, Colchester, shortly after 1 p.m. on Friday, when he was seized with heart trouble and fell to the ground. Assistance was soon at hand and he was removed to Hyderabad Barracks guard-room. Dr. Hickinbotham pronounced that death was due to heart failure.

The late Councillor Stewart.

The funeral of the late Councillor A. C. Stewart, Neville Street, Cardiff, took place on 23rd inst. A large number of his constituents were present, and there was a beautiful array of floral tributes. En route to the cemetery the general public exhibited their respectful sympathy. The Lord Mayor, accompanied by the Town Clerk, attended in the civic state coach, and the aldermen and councillors were also present in their robes, the cortege being headed by members of the fire brigade and city police force, in charge of the Deputy Chief Constable. Representatives from various bodies were in attendance.

Objection to the "Humane Killer."

At Kidderminster Town Council a letter was read from the Master Butchers' Association to the Local Government Board, protesting against the universal adoption of the humane-killer in slaughter-houses. The Deputy stated that the butchers' objection is that while the humane-killer is suitable for cattle, it is useless for sheep and pigs. Mr. Tandy said a practical man assured him that the humane-killer is hopeless as regarded pigs, and it is just as likely to kill the man as the pig. The matter was referred to the Health Committee.

Diseased meat, and Horseflesh.—£30 fine.

William Thomas Godbold, a butcher, of St. Andrew's Road, Walthamstow, was fined £30 and ordered to pay five guineas costs at Stratford Police Court on 22nd inst.—£20 for having diseased meat intended for human food on his premises, and £10 for keeping horseflesh for sale for human food without displaying a notice to that effect.

It was stated in evidence that on the shop being searched about 60 lb. of bad beef and pork, and about 100 lb. of horseflesh were found.

Mr. C. C. Sharman, who defended, said that Godbold bought the meat on the same day, and it was examined by the authorities, and he had not noticed that it was diseased. The horseflesh was bought as "bull beef," and defendant did not know it was horseflesh.—*Lloyd's News.*

Meat Inspection in Australia.

The inspection of meat for export has been put on a uniform basis throughout Australia, and in future will be carried out entirely by officers of the Commonwealth Department of Trade and Customs. In the past the Commonwealth has at certain ports made use of State officers, but this is now done away with, and every inspector will receive his instructions from the one source. The *modus operandi* in the case of frozen meat will be for the live animals to pass inspection, then the carcases, and finally the frozen meat as it goes on board ship. The routine in connection with tinned meats provides for similar triple inspection. Every piece of meat passed must bear the Commonwealth brand of approval for export, and every tin has a symbol embossed on it, indicating where and when the meat was packed and the quality.

[Here, it will be noted, the inspection begins with the live animal. In this country it begins with the dead carcase. The administration "down under" is one and the same. In Great Britain two separate Departments are needed, and in the case of the Local Government it practically gives a free hand to every Local Authority in England and Wales to deal with diseased meat as it likes.—ED. *The Meat Trades' Journal.*]

The Connemara Pony, and some others.

The sweeping depletion in our horse supplies by this sanguinary war must leave a need that in time to come may be very seriously felt. While more extensive importation may help to meet the difficulty, such means cannot be relied upon to completely fill the gap, so that it has become necessary for us to work what material we may now have to the very best advantage, and to devote ourselves more closely to what breeding facilities still exist in our land. And while horse breeding has become a fine art, there still exist great possibilities in the equine sphere which have as yet received little or no attention.

Reference is made to the pony, and an effort is being made to popularise foreign breeds of ponies in these lands. It is well known, or should be well known, that Ireland can breed a pony that will compare favourably with those of any other country. It is not the first time that mention has been made in these columns to the claims of the Connemara Pony, a hardy mountain breed, which embodies all the essential elements of speed, courage, strength, soundness, and docility, or, as one sound judge has described them, "an exceptionally wiry class of pony, showing a great deal of the Barb or Arab blood, but without exception the best animal he ever knew." A special Connemara Pony Committee was formed to further this breed, but owing to lack of support and encouragement little has been accomplished, and thus a valuable source of income to this country is allowed to lie unproductive.

Not so, however, in other lands, and the following extract from an article describing the Norwegian pony, by Mr. H. A. Bryden, and contributed to the pages of Baily's Magazine, will serve to show how other countries are *not* emulating our methods.

For many years an admirer of the Norwegian pony, Mr. Bryden believed that if ever we should need to recruit the smaller stamp of horses in Great Britain this breed would be well worth looking after. In describing these animals the writer says the Norwegian horse is in effect a pony, for the stature rarely attains 15 hands, and the majority of the animals seen average from 13 to 14 hands. There are two types well recognised in that country. These are the Vestland or Nordfjord horse, found, as its name implies, on the western side of the country, and the Gudbrandsdal horse, to be met with on the eastern or Christiania side.

The Vestland pony is certainly one of the most ancient types of horse in the world. This is evidenced by the the colour of the race—usually dun, cream colour, and pale yellow. A very large percentage of these ponies are found to carry zebra-like markings on the fore limbs just above the knees, and a dark list is nearly always found running down the centre of the mane and along the spine to the tail. What country was the ancestral home of the Norwegian Vestland pony it is hard to say, but the probabilities point to those very deserts of Central Asia—where the Przewalski wild horse still roams—which are by many great authorities believed to be the cradle of the equine race.

The Vestland or Nordfjord pony is at home in the rough mountainous and wild country in which for ages past it has been utilised. It is hardy, strong, tough of constitution, and marvellously sure-footed. As a beast of traction it is first-rate, pulling with ease and docility heavy weights up and down rough country in the primitive farm carts. It is also much used in the stolkjorres which convey travellers and tourists about Norway during summer. The ponies have excellent legs and feet, are good trotters, are seldom sick or sorry, and stand a large amount of hard work on what our horse masters would regard as very indifferent fare. When broken to bit and saddle they make quite good remounts.

As pack animals they carry astonishing burdens. He had seen them laden with a fabulous collection of food, bedding, and farm gear, all to be carried up steep mountain paths to distant voeters, where the women folk are employed during summer in herding their cows and goats, and making cheeses. Yet the stout and willing beasts make nothing of such burdens, and march off cheerfully with their masters up the toughest of mountain climbs. They are wonderfully sensible, docile and amenable—the result of most kindly treatment and of constant companionship.—*The Farmers' Gazette* (Dublin).

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended Sept. 23		8	8			4	9	12	22	6	60	29
Corresponding week in	1915 ...	6	6					9	20	2	27	118
	1914 ...	9	12			2	17	4	4		94	598
	1913 ...	9	9					23	41	1	32	610
Total for 39 weeks, 1916		401	572	1	24	40	98	1779	3965	195	3536	8768
Corresponding period in	1915 ...	442	503			38	68	‡632	‡1365	163	3163	13920
	1914 ...	557	612	22	108	81	249	1530	2642	155	3157	31068
	1913 ...	411	453			121	298	1999	3999	134	1868	24987

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked :—

Board of Agriculture and Fisheries, Sept. 26, 1916 Excluding outbreaks in army horses.

IRELAND. Week ended Sept. 23		...	...	...	...	...	...	Outbreaks ...	8	11	49
Corresponding Week in	1915 ...	...	...	...	...	...	...	1	7	2	43
	1914 ...	...	...	...	...	...	...	...	7	...	1
	1913 ...	...	...	...	...	...	...	...	4	3	28
Total for 39 weeks, 1916 ...		3	7	...	...	...	...	54	318	256	1580
Corresponding period in	1915 ...	1	1	...	...	1	3	58	314	193	1105
	1914 ...	1	1	76	957	...	...	67	407	161	842
	1913 ...	...	...	...	...	...	...	102	394	116	721

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Sep. 25, 1916

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

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